

## EAST Search History

| Ref # | Hits | Search Query  | DBs                | Default Operator | Plurals | Time Stamp          |
|-------|------|---|--------------------|------------------|---------|---------------------|
| S1    | 1    | ("3330645").PN.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/10/02<br>14:21 |
| S2    | 1    | ("4721287").PN.   | US-PGPUB;<br>USPAT | OR               | OFF     | 2007/10/29<br>15:21 |
| S3    | 336  | 266/217.ccls.   | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/29<br>16:04 |
| S4    | 406  | 266/280.ccls.   | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/29<br>16:04 |
| S5    | 100  | S3 and nozzle   | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/29<br>16:05 |
| S6    | 70   | S4 and nozzle   | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/29<br>16:28 |
| S7    | 8758 | nozzle and refractory<br>and metal and heat                       | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/30<br>11:49 |
| S8    | 849  | nozzle and refractory<br>and metal and heat<br>and "266".clas.    | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/30<br>11:49 |
| S9    | 88   | nozzle same refractory<br>same metal same heat<br>and "266".clas. | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/30<br>11:50 |
| S10   | 2859 | nozzle and "266".clas.  | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/30<br>13:14 |
| S11   | 204  | nozzle same refractory<br>same furnace and<br>"266".clas.         | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/10/30<br>13:15 |
| S14   | 170  | nozzle same refractory<br>same heat and "266".<br>clas.           | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/11/01<br>08:14 |
| S15   | 336  | 266/217.ccls.   | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/11/01<br>13:15 |
| S16   | 33   | S15 and nozzle and<br>(copper or stainless<br>steel)              | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/11/01<br>13:15 |
| S17   | 406  | 266/280.ccls.   | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/11/01<br>13:18 |
| S18   | 15   | S17 and nozzle and<br>(copper or stainless<br>steel)              | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/11/01<br>13:18 |
| S19   | 393  | nozzle same heat<br>conducting                                    | US-PGPUB;<br>USPAT | ADJ              | ON      | 2007/11/01<br>13:23 |

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|-----|------|---|---|-----|-----|---------------------|
| S20 | 219  | nozzle same heat conducting and gas   | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2007/11/01<br>13:24 |
| S21 | 1    | ("5871785").PN.   | US-PGPUB;<br>USPAT                        | OR  | OFF | 2007/11/01<br>13:32 |
| S22 | 1    | ("3971548").PN.   | US-PGPUB;<br>USPAT                        | OR  | OFF | 2007/11/01<br>13:41 |
| S23 | 1    | ("5371759").PN.   | US-PGPUB;<br>USPAT                        | OR  | OFF | 2007/11/01<br>13:42 |
| S24 | 1392 | "266".clas. and nozzle same refractory  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/06/23<br>16:32 |
| S25 | 902  | "266".clas. and nozzle same refractory and gas and metal  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/06/23<br>16:33 |
| S26 | 546  | "266".clas. and nozzle same refractory and gas and metal and (jacket or cover\$3)                           | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/06/23<br>16:34 |
| S27 | 298  | "266".clas. and nozzle same refractory and gas and metal and (jacket or cover\$3) and (nozzle same furnace) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/06/23<br>16:34 |
| S28 | 12   | S27 and nozzle.ti.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/06/23<br>16:37 |
| S29 | 115  | nozzle.ti. and refractory and gas same furnace  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/06/23<br>16:58 |
| S30 | 144  | 266/268.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/07/08<br>16:22 |
| S31 | 30   | 266/268.ccls. and nozzle and refractory   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2008/07/08<br>16:43 |
| S32 | 339  | 266/217.ccls.   | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2008/07/08<br>17:06 |
| S33 | 33   | S32 and nozzle same refractory and gas  | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2008/07/08<br>17:06 |

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| S34 | 62   | "266".clas. and nozzle same refractory and gas and metal and (heat\$3 near2 element) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/07/08<br>17:14 |
| S35 | 268  | 266/220.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:23 |
| S36 | 853  | 266/99.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:23 |
| S37 | 217  | 266/100.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:23 |
| S38 | 146  | 266/268.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:23 |
| S39 | 1457 | S35 or S36 or S37 or S38   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:25 |
| S40 | 191  | S39 and nozzle same (gas or vapor)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:25 |
| S41 | 122  | S40 and refract\$5   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:25 |
| S42 | 66   | S41 and furnace  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:25 |
| S43 | 55   | S42 and (copper or Cu or steel)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:26 |
| S44 | 371  | 266/265.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:28 |
| S45 | 261  | S39 and (nozzle or tuyere) same (gas or vapor)                                       | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:29 |

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| S46 | 160    | S45 and refract\$5  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:29 |
| S47 | 85     | S46 and furnace   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:29 |
| S48 | 71     | S47 and (copper or Cu<br>or steel)                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:29 |
| S50 | 280    | S39 and (nozzle or<br>tuyere) same (gas or<br>vapor or fluid)         | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:32 |
| S51 | 169    | S50 and refract\$5  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:32 |
| S52 | 92     | S51 and furnace   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:32 |
| S53 | 77     | S52 and (copper or Cu<br>or steel)                                    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>16:32 |
| S54 | 290602 | (nozzle or tuyere)<br>same (gas or vapor or<br>fluid)                 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:03 |
| S55 | 5753   | S54 and refract\$5 and<br>furnace and (copper or<br>Cu or steel)      | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:04 |
| S56 | 1137   | S55 and "266".clas.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:05 |
| S57 | 1019   | S56 and metal   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:05 |
| S58 | 7747   | (nozzle or tuyere)<br>same (gas or vapor or<br>fluid) same refractory | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:07 |

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| S59 | 2419  | (nozzle or tuyere) same (gas or vapor or fluid) same refractory and furnace and (copper or Cu or steel)                              | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:07 |
| S60 | 653   | (nozzle or tuyere) same (gas or vapor or fluid) same refractory and furnace and (copper or Cu or steel) and "266".clas.              | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:08 |
| S61 | 579   | (nozzle or tuyere) same (gas or vapor or fluid) same refractory and furnace and (copper or Cu or steel) and "266".clas. and metal    | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:08 |
| S62 | 404   | (nozzle or tuyere) same (gas or vapor or fluid) same refractory same furnace and (copper or Cu or steel) and "266".clas. and metal   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:08 |
| S63 | 308   | (nozzle or tuyere) same (gas or vapor or fluid) same refractory same furnace same metal and (copper or Cu or steel) and "266". clas. | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:08 |
| S64 | 10    | ("1362702"   "2023025"   "3031178"   "3558119"   "3831918"   "4043542").PN. OR ("4572487").URPN.                                     | US-PGPUB;<br>USPAT;<br>USOCR              | ADJ | ON | 2008/09/23<br>17:18 |
| S65 | 10137 | uwe.in.  | US-PGPUB;<br>USPAT;<br>USOCR              | ADJ | ON | 2008/09/23<br>17:34 |
| S66 | 7     | zulehner.in.   | US-PGPUB;<br>USPAT;<br>USOCR              | ADJ | ON | 2008/09/23<br>17:34 |
| S67 | 12    | zulehner.in.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:35 |

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| S68 | 11 | rinnhofer.in.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/23<br>17:35 |
| S69 | 12 | ("3076085"  <br>"4228314"   "4533385"<br>"4592066"  <br>"4617671"   "4749408"<br>"5052018").PN. OR<br>("5371759").URPN.   | US-PGPUB;<br>USPAT;<br>USOCR              | ADJ | ON | 2008/09/24<br>18:12 |
| S70 | 22 | (US-20010033046-\$ or<br>US-20020158377-\$ or<br>US-20030090043-\$).<br>did. or (US-3330645-\$<br>or US-3971548-\$ or<br>US-4023676-\$ or US-<br>4138098-\$ or US-<br>4249719-\$ or US-<br>4424955-\$ or US-<br>4746038-\$ or US-<br>4930757-\$ or US-<br>4951929-\$ or US-<br>5198179-\$ or US-<br>5257280-\$ or US-<br>5371759-\$ or US-<br>5458320-\$ or US-<br>5465942-\$ or US-<br>5744050-\$ or US-<br>5803948-\$ or US-<br>5863490-\$ or US-<br>5871785-\$).did. or (US-<br>3330645-\$).did. | US-PGPUB;<br>USPAT;<br>USOCR              | ADJ | ON | 2008/09/24<br>18:21 |
| S71 | 3  | S70 and spacer  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/24<br>18:21 |
| S72 | 3  | S70 and thread  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/24<br>18:22 |

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| S73 | 22    | (US-20010033046-\$ or US-20020158377-\$ or US-20030090043-\$). did. or (US-3330645-\$ or US-3971548-\$ or US-4023676-\$ or US-4138098-\$ or US-4249719-\$ or US-4424955-\$ or US-4746038-\$ or US-4930757-\$ or US-4951929-\$ or US-5198179-\$ or US-5257280-\$ or US-5371759-\$ or US-5458320-\$ or US-5465942-\$ or US-5744050-\$ or US-5803948-\$ or US-5863490-\$ or US-5871785-\$).did. or (US-3330645-\$).did. | US-PGPUB;<br>USPAT;<br>USOCR              | ADJ | ON | 2008/09/25<br>09:44 |
| S74 | 3     | S73 and engage   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/25<br>09:44 |
| S75 | 1     | "20060273500"  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/25<br>09:46 |
| S76 | 19294 | outer same inner same (pipe or tuyere or nozzle) same thread   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/25<br>09:48 |
| S77 | 455   | outer (pipe or tuyere or nozzle) same inner (pipe or tuyere or nozzle) same thread   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/25<br>09:48 |
| S78 | 19    | outer (pipe or tuyere or nozzle) same inner (pipe or tuyere or nozzle) same thread and furnace   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/25<br>09:56 |
| S79 | 66    | outer (pipe or tuyere or nozzle) same inner (pipe or tuyere or nozzle) same (groove or screw) and furnace  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2008/09/25<br>10:54 |

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| S80 | 2   | ("3330645").PN.  | US-PGPUB;<br>USPAT;<br>USOCR              | OR  | OFF | 2008/09/25<br>11:50 |
| S81 | 350 | 266/217.ccls.  | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2009/03/04<br>11:24 |
| S82 | 410 | 266/280.ccls.  | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2009/03/04<br>11:24 |
| S83 | 301 | "266".clas. and nozzle<br>same refractory and<br>gas and metal and<br>(jacket or cover\$3)<br>and (nozzle same<br>furnace) | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:24 |
| S84 | 34  | 266/268.ccls. and<br>nozzle and refractory   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:24 |
| S85 | 34  | 266/268.ccls. and<br>nozzle and refractory   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:24 |
| S86 | 350 | 266/217.ccls.  | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2009/03/04<br>11:24 |
| S87 | 35  | S86 and nozzle same<br>refractory and gas  | US-PGPUB;<br>USPAT                        | ADJ | ON  | 2009/03/04<br>11:24 |
| S88 | 62  | "266".clas. and nozzle<br>same refractory and<br>gas and metal and<br>(heat\$3 near2<br>element)                           | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:25 |
| S89 | 268 | 266/220.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:25 |
| S90 | 862 | 266/99.ccls.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:25 |
| S91 | 217 | 266/100.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:25 |
| S92 | 148 | 266/268.ccls.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON  | 2009/03/04<br>11:25 |



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| S93 | 1468 | S89 or S90 or S91 or S92  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2009/03/04<br>11:25 |
| S94 | 194  | S93 and nozzle same (gas or vapor)  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2009/03/04<br>11:25 |
| S95 | 124  | S94 and refract\$5  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2009/03/04<br>11:25 |
| S96 | 66   | S95 and furnace   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2009/03/04<br>11:26 |
| S97 | 55   | S96 and (copper or Cu or steel)   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2009/03/04<br>11:26 |
| S98 | 66   | outer (pipe or tuyere or nozzle) same inner (pipe or tuyere or nozzle) same (groove or screw) and furnace | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO | ADJ | ON | 2009/03/04<br>11:26 |

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